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ABSTRACT

This handbook provides an overview of the consultation role for the school psychologist and distinguishes between consultation and other forms of school psychological services. Three major consultation models in school psychology are reviewed: (1) mental health consultation; (2) organization-development consultation; and (3) behavioral consultation. The characteristics of behavioral consultation are defined and discussed, and its historical and theoretical background are examined. The materials identify stages and verbalizations in behavioral consultation and provide examples of practice exercises. Problem identification and analysis are discussed and suggestions are given for implementation. Problem evaluation and its importance to accountability are discussed. Examples of interview forms are included along with practice exercises throughout the document. (JAC)

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HANDBOOK FOR BEHAVIORAL CONSULTATION

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CHAPTER I

Introduction to Behavioral Consultation

This introductory chapter has four purposes: (1) To provide the learner with a brief overview of the consultation role of the school psychologist; (2) to distinguish between consultation and other forms of school psychological services; (3) to briefly review the three major consultation models in school psychology; and (4) to define and discuss the characteristics of behavioral consultation.

Consultation Role of the School Psychologist

School psychologists have been doing "consultation" for many years, but until only recently has our profession been able to define what consultation is or should be. The great growth and development in the area of consultation came about shortly after World War II as psychologists and other mental health professionals assumed increasingly important roles in education. Perhaps the first official declaration of consultation as a legitimate role for the school psychologist came about at the Thayer Conference in 1955 (Cutts, 1955). The Thayer Conference, like the upcoming Olympia Conference, dealt with the definition and delineation of roles for psychologists in the schools. Since psychologists could reach many more children and youth through consultation with teachers, administrators, and parents, this indirect form of psychological service was considered not only feasible, but desirable. Although school psychologists have been doing consultation for

as long as there has been a school psychology profession, the definition of what consultation is and how it is practiced has been a recent occurrence. In an incisive review of the consultation role of the school psychologist, Reschly (1976) suggested that historically, any contact between a school psychologist and other school personnel was considered "consultation." As such, Reschly maintained that consultation has been an area which has had a "frenzied" and "faddish" past, but it is a role "fundamental" to the success of our profession.

A major reason for this lack of a clear definition of the consultation role is the relative neglect of consultation in school psychology training programs. Although there are few data regarding consultation training, one survey of school psychology training programs (Goh, 1977) found that: (a) School-based consultation techniques received increased attention when compared to school psychology programs of the 1960s and (b) Consultation training is emphasized more in doctoral than in subdoctoral training programs.

This emphasis upon consultation training at the doctoral level is surprising since most practicing school psychologists are trained at subdoctoral levels. In the most recent national survey of school psychology training programs, Meyers, Wurtz, and Flanagan (1981) found that only 32% of the subdoctoral school psychology training programs offer at least one course in consultation techniques. Moreover, fieldwork as part of consultation coursework is not provided in 73% of the programs. These authors also

found that subdoctoral training programs were more likely to teach behavioral consultation than other consultation models (to be discussed later).

The Meyers et al. (1981) survey is enlightening for several reasons. One, although consultation training has increased, it still receives relatively low priority when compared to other course work (e.g., assessment, special education, etc.). Two, most subdoctoral programs either do not offer a course in consultation or offer courses with consultation as one topic among many topics. Three, when consultation courses are offered, almost 3/4 of the school psychology training programs do not require field work as part of the requirements for the course. Finally, doctoral programs tend to emphasize consultation models other than behavioral consultation, whereas subdoctoral programs tend to emphasize the behavioral model.

Consultation is a legitimate and efficient form of school psychological service. Although we have officially been performing this role for over two decades, a clear definition of the consultation role is a recent occurrence. Most professionals agree that consultation is a good thing to do, however, school psychology programs have not emphasized training in consultation techniques relative to other areas of training. Finally, and perhaps most importantly, school administrators and teachers have continued to see our primary role as one of "tester" and "qualifier" of children for special education services. This perception of us by school personnel is due in no small part to Public Law 94-142 which emphasizes assessment roles rather than consultation roles. This handbook and videotape will hopefully

provide the information and the motivation for you to develop consultation skills and a role for yourself as behavioral consultant.

Consultation versus Counseling

Consultation is a process that is appropriate for bridging the gap between the school psychologist and the teacher (or parent). This gap is an information gap in that school psychologists possess specialized knowledge and skills that can be applied by teachers in solving academic and behavior problems of children and youth. As such, consultation's goal is to increase communication between the consultant (school psychologist) and the consultee (parents or teachers).

Consultation emphasizes the two-way nature of communication and a voluntary, equal, and collegial relationship between consultant and consultee. There are several characteristics of consultation that distinguish it from counseling or psychotherapy. One, consultation is an indirect form of psychological service. That is, a consultant works with a consultee who, in turn, works directly with a client (i.e., child or adolescent). In counseling, school psychologists work directly with the referred child or adolescent, thus constituting a form of direct service.

A second difference between consultation and counseling is that in the former, the participants (the consultant and consultee) are typically two professionals (e.g., psychologist and teacher). Consultants are defined as those persons who have specialized knowledge that can be applied to solve problems encountered by teachers. Consultees are defined as persons who

either seek or need this knowledge to solve the problems they encounter in their working setting. Clients are defined as those persons who are presenting those problems in the consultee's work setting, which the consultee does not know how to solve.

Finally, consultation more strongly emphasizes a coordinate/cooperative relationship than does counseling. In counseling, the typical relationship is one of the therapist taking primary responsibility for effecting changes in the client's behavior, beliefs, attitudes, and/or feelings. Thus, counselors work with the personal problems presented by clients in a counseling relationship. Consultants do not work with the personal problems of consultees in a consultation relationship.

Consultation Defined

Regardless of the consultation model used, consultation is a technique that always has the following six characteristics:

1) It is a helping or problem-solving process.
2) It occurs between a professional help-giver and a help-seeker who has responsibility for the welfare of another person.
3) It is a voluntary relationship.
4) The help-giver and help-seeker share in solving the problem.
5) The goal is to help solve a current work problem of the help-seeker.
6) The help-seeker profits from the relationship in such a way that future problems may be handled more sensitively and skillfully. (Meyers, Parsons, & Martin, 1979).

These six characteristics define the basic principles of consultation. Of particular importance in this definition is the specification of consultation as a problem-solving process and the educational benefits of consultation for the consultee. That is, consultation is a process by which problems are solved by both the consultant and consultee. Depending upon the model of consultation used, the foci of this problem-solving process will differ. Consultation also has educational benefits in that consultees should be better able to deal with future problems of a similar nature after going through the consultation process.

Major Consultation Models

There are three major consultation models represented in training and practice of school psychologists. These models are: (1) mental health consultation (Caplan, 1970); (2) organization-development consultation (Schmuck & Miles, 1971), and (3) behavioral consultation (Bergan, 1977). These consultation models differ significantly on such issues as theoretical orientation, typical problems, goals of consultation, intervention methods, and criteria for evaluation outcomes of consultation (Reschly, 1976). The purpose of this section is to briefly compare and contrast the three major models of school consultation. Table 1 should facilitate this comparison.

In terms of theoretical orientation, the mental health consultation (MHC) model comes out of the psychoanalytic tradition of Freud and the more traditional psychodynamic approaches to personality. As such, the MHC model focuses primarily upon changing consultees underlying attitudes which

supposedly prevent them from dealing objectively with clients. Thus the focus of MHC is more on changing consultee (teacher) attitudes than upon changing client (children's) behavior which are causing problems in the school setting.

In contrast, organization development consultation (ODC) is rooted in the theoretical tradition of Lewin and gestalt psychology. ODC has been applied for years in industrial settings to counteract poor employee attitudes and performances supposedly due to poor lateral and hierarchical communication, poor conflict management, a lack of sensitivity to changing organizational environments, and antiquated theories regarding employee motivation (Meyers, et al., 1978). The typical focus in ODC is to intervene with problems faced by teachers at more of a systems (global) level by improving communicating skills between administrators and teachers, between teachers and teachers, teachers and children, teachers and parents, and so forth. Essentially, ODC posits that the functioning of the school will be improved as a whole if changes are effected at all levels of the system (from top administration down to the classroom level). Changes are typically brought about through communication skills training, group processes, feedback, and reaching a group consensus on the goals and roles of the school.

Behavioral consultation (BC) has its roots in the learning theory tradition of Watson, Skinner, and Bandura. The focus of the BC approach is upon changing children's behavior in settings where behavior takes place (e.g., the classroom, playground, etc.) Unlike the MHC and ODC models, behavioral consultation's goal is to identify antecedents and consequences

of behavior in the naturalistic settings to identify variables influencing the frequency, rate, intensity, and/or duration of problem behavior. The success of BC is evaluated in terms of the degree of behavior change and the social importance of the behavior change for teachers, administrators, and/or parents.

TABLE 1

Consultation Models and School Psychology

Variables in Consultation \ Consultation Approach	Behavioral Consultation (BC)	Mental Health Consultation (MH)	Organization Development Consultation (OD)
. Theoretical Basis	Behaviorist Tradition of Watson & Skinner - more recently, Social Learning Theory-Bandura, Mischel	Psychoanalytic Tradition Recent Personality Theory especially, Psychodynamic Approaches	Field Theory-Lewin Social Psychology and Group Processes
. Consultant -Consultee Relationship	All approaches suggest a voluntary, egalitarian, colleague relationship		
. Primary Change Agent	Consultee - usually a parent or teacher	Varied depending on level of consultation - see Caplan or Meyers	Consultant (in role of catalyst or facilitator)
. Typical Cases	Behaviorally defined learning and/or adjustment problems of children	Shortcomings in consultee's affective understanding; e.g., lack of skill, lack of objectivity, theme interference, etc.	Conflict in the system and/or poor climate in or lack of responsiveness of the organization
. Typical Goals	Changes in frequency, duration, etc. of behavior. Develop new behaviors or change frequency of existing behaviors.	Increase consultee's insight and understanding of normal and abnormal emotional development	Improved functioning of the system through improved communication skills, conflict resolution reaching consensus on goals and roles etc.
. Change Strategies	Changes implemented by consultee in antecedent, situational, or consequent environment - stimulus control, outcome control, or symbolic control (e.g., modeling)	Varied, but typically involves verbal-relationship oriented methods in which the consultant's psychotherapeutic skills are applied to concerns of the consultee	Usually, Group Processes designed to improve consultee skills
. Initiation of Services	Referral by teachers or parents. Consultant is member of school staff	In both MH and OD the basic literature suggests the consultant is an outside person who initiates consultation through invitation - presumably, the MH or OD Consultant could also be employed within the system	
. Evaluation of Outcomes Short-Term	Comparison of pre and post data on frequency, etc., of behavior	Usually subjective self-report from consultees or consultant evaluation of consultee "growth"	Self-report supplemented by structured observation of consultee's skills in group sessions
. Evaluation Long-Term	All models claim the goal of long term changes in consultee skills to cope with problems. Very few efforts to evaluate these changes have appeared to date.		
0. Weaknesses	Appropriateness of behaviors changed-Intrusiveness-Data Collection	Degree of generalization of changes in consultees to healthier environments for children	Relationship of improved process to outcomes, especially child behaviors

CHAPTER 2

Historical and Theoretical Background of Behavioral Consultation

The history of behavioral consultation parallels the history of behavior therapy which goes back to the works of Pavlov, Watson, Jones, and Skinner. Like other consultation models, behavioral consultation has two purposes: 1) preventive and 2) remedial. That is, the primary goal of behavioral consultation is to prevent child behavior problems through an educational approach. Behavioral consultation is educational in that consultees are provided with skills and techniques, which they did not possess before consultation, to be used to prevent serious behavior problems in children and youth. The second purpose of consultation is remediation of existing behavior problems. Thus, parents and teachers come to the behavioral consultant because of some difficulty they are experiencing with managing the behavior of children. In these cases, consultation is remedial because current behavior problems are corrected and is preventive in that the consultee is provided with skills to prevent future behavior problems.

Learning Theories

Behavioral consultation uses theories of learning as the basis for interventions with the learning and adjustment problems of children and youth. Three learning theories are most often used: 1) respondent conditioning, 2) operant conditioning, and 3) modeling. These three theories are

usually subsumed under one large theory known as social learning theory. For purposes of this workshop, a brief review of these three learning theories will be presented.

Respondent conditioning. Also called Pavlovian or classical conditioning, this type of learning involves changing the conditions under which an innate response takes place. An innate or unconditioned response is ordinarily elicited by an unconditioned stimulus. Examples of unconditioned stimuli (UCS) are loud noises, food, bright light, temperature, etc. Examples of unconditioned responses (UCR) are salivation, knee jerks, constriction or dilation of pupils, increases in heart rate, blood pressure, and galvanic skin response. When conditioning (learning) takes place, the UCS is replaced by the conditioned stimulus (CS). The CS is a previously neutral stimulus which acquires eliciting properties as a function of being paired with UCS. CS's can be any environmental event. CS's elicit conditioned responses (CR) which are the same as UCR's except they are now elicited by a CS. CR's are also frequently of less magnitude than UCR's. Thus, in respondent conditioning, the CS is paired with the UCS to elicit the CR. This pairing is most effective when the CS is presented slightly before the UCS (approximately 1/2 second) and is terminated before the onset of the UCS. This is called forward-delayed conditioning. The well-known prototype of respondent conditioning is Pavlov's dog experiment in which the sound of a bell (CS) was paired with food (UCS) to elicit the CR-UCR (salivation).

The following behavior therapy techniques use respondent conditioning as their basis:

1) Systematic Desensitization by Reciprocal Inhibition (Wolpe)
2) Implosive Therapy (Stampfl & Levis)
3) Covert Sensitization (Cautela)
4) Conditioned Aversion (Rachman)
5) Emotive Imagery (Lazarus)
6) Flooding (Barrett & DeMoor)

Operant conditioning. In respondent conditioning, a stimulus elicits a response from a person who is relatively passive vis-a-vis the environment. The environment acts on the person and the person responds to the environment in an essentially reflexive manner. In operant learning, the person actively acts upon or operates upon the environment emitting behavior to which the environment reacts. The response is therefore instrumental in bringing about an environmental event. It is the environment's reaction to a person's response that determines what will happen to that response, whether it will be more or less likely to be emitted again under similar circumstances on future occasions. The key to operant learning is the consequence of the response. Behavior is a function of its consequences.

The key terms in operant conditioning also deal with stimuli and responses. A stimulus which comes before a response and which occasions that response is called a discriminative stimulus (S^d). S^d's set the occasion for a response to occur. A stimulus which follows a response and which leads to an increase in the frequency of that response on future

occasions is called a reinforcing stimulus. A stimulus which follows a response that leads to a decrease in the rate of that response is called a punishing stimulus. The primary difference between respondent and operant learning is that in the former, all learning takes place before the response occurs (CS-UCS), and in the latter, all learning takes place after the response occurs ($R \rightarrow S^{r+}$).

Operant conditioning is the most frequently used behavior change strategy in behavioral consultation. In behavioral consultation, the consultant tries to identify the antecedents (S^d's) and consequences (S^{r+}'s) of a given behavior or set of behaviors. A systematic study of the relationship between environmental antecedents and response consequences is known as a functional analysis of behavior because it asks what function a given response serves in its interaction with the environment. Such a functional analysis is necessary if one desires to bring about a change in operant behavior. To behavioral consultants, this functional analysis is the key to developing successful consultation plans with consultees to effect changes in client's behavior.

Below is a partial list of intervention techniques which are based upon operant conditioning.

1) Social Reinforcement
2) Token Reinforcement
3) Premack Principle
4) Differential Reinforcement of Other Behavior (DRO)

5) Differential Reinforcement of Low Rates (DRL)

6) Differential Reinforcement of Incompatible Behavior (DRI)

7) Negative Reinforcement

8) Extinction

9) Sensory Extinction

10) Overcorrection: a) Restitution, b) Positive Practice

11) Response Cost

12) Group Contingencies: a) Independent, b) Dependent, c) Interdependent

Modeling. Operant conditioning represents a useful, but inefficient way of learning complex responses in many situations. Operant learning is sometimes a slow process of successive approximations to the desired behavior. In terms of childhood socialization, learning through operant conditioning would probably not have much survival value. For example, children learn not to cross busy streets from ways other than adverse response consequences. Bandura asserts that much learning occurs through a process known as modeling or observational learning. In analyzing modeling, one speaks of an observer who watches a model engage in some behavior. If the consequences of the model's behavior are reinforcing, then the observer will be more likely to imitate the model's behavior. This is known as vicarious reinforcement. If the consequences of the model's behavior are punishing, then the observer will be less likely to imitate behavior--this is called vicarious punishment.

Bandura differentiates between the acquisition and performance of a response. That is, a person may acquire the capacity to make a response that has been modeled, without necessarily emitting that response at some later time. Persons who know how to respond in certain situations, but do so at low levels are said to have performance deficits. Persons who do not know how to respond in certain situations are said to have skill deficits. Two processes are necessary for learning to occur by modeling. These are: 1) attention and 2) retention. That is, a person has to attend to a model's behavior and retain the model's behavior in memory for future performance. Two processes are necessary for performing a response: 1) motor-reproduction and 2) motivation. That is, a person must have the motor skills necessary to perform the response and has to have some incentive (reinforcement) for doing so.

In behavioral consultation, it is important to distinguish between behavior problems which are skill deficits versus performance deficits. If the child has never displayed the response, then it is probably a skill deficit. If the child infrequently displays the response, then it is a performance deficit. This distinction is important in consultation because consultation plans will be different for skill deficits and performance deficits. For skill deficits, some form of modeling and/or instruction is typically used. With performance deficits, reinforcement based techniques are typically used. The consultant's distinction between these two deficits depends upon the results of an adequate behavioral assessment. Below is a partial listing of the types of modeling which have been used.

1) Live Modeling
2) Symbolic Modeling (filmed)
3) Verbal Modeling
4) Self Modeling
5) Covert Modeling

A Problem-Solving Model for Behavioral Consultation

Behavioral consultation is a problem-solving model which is designed to: 1) assist consultees to define the problems they face in dealing with clients, 2) to formulate and to implement plans to solve problems, and 3 to evaluate the attainment of consultation goals and the effectiveness of plans implemented to achieve these goals. Behavioral consultation may be used in assisting parents to solve problems involving their children. It may also be applied in educational settings at different levels in the institutional hierarchy. A consultant might use the model to assist an administrator and a school staff to solve a problem relating to some aspect of an instructional program. Similarly, he or she could use the approach to work with a teacher in solving a problem involving an individual student.

The goal of behavioral consultation is to promote the mental health and educational development of children and youth. In pursuing this broad goal, consultative problem solving may focus upon problems involving prevention and/or remediation. The range of problems dealt with in behavioral consultation includes all aspects of social, emotional, and intellectual

growth. Thus, a behavioral consultant might find himself or herself helping a parent to control a child's aggressive behavior or helping a teacher to increase the accuracy or speed with which a student solves math problems.

The goals of behavioral consultation are always defined in behavioral terms. In every case, consultation is aimed at producing clearly specified changes in behavior. For example, the goal of reducing a child's aggressiveness might be defined in terms of reductions in hitting behavior or increasing a child's self concept might be behaviorally defined as incressing the ratio of positive to negative self-verbalizations.

This strategy of defining consultation goals in behavioral terms stands in sharp contrast to the widely followed practice of conceptualizing goals in terms of the alleviation of pathological states within the individual. Many writers have described the implications of conceptualizing problem behaviors in terms of pathological states rather than simply in terms of behavior change. The pathological-state approach is generally referred to as the medical model of behavior. The central assumption underlying the medical model is that maladaptive behaviors are symptomatic of an underlying pathological condition within the individual. In behavioral consultation, behavior is the focus of treatment. Thus, the goal is to change behavior in a desired fashion. The emphasis is on what the individual accomplishes in the course of behavior change, not on the pathology presumed to underlie maladaptive behavior.

Features of behavioral consultation. There are several features of consultative problem solving which markedly affect the nature of behavioral

consultation. First, the model depicts the consultee as a problem solver and involves him or her in the problem solving process. The consultee is not merely the passive recipient of advice but plays an active role in designing the plan to solve the problem. Second, behavioral consultation encourages the development of problem-solving skills in the client. The client can be involved in the problem-solving process in essentially the same way as the consultee. The extent of the client's involvement depends upon the developmental level of the client, the nature of the problem, and the views of the consultee on how much responsibility children and youth should be given in managing their own affairs. Third, behavioral consultation provides a knowledge link between consultant and consultee. Consultants provide a medium through which knowledge producers can communicate information to knowledge consumers. Fourth, behavioral consultation links decision making to empirical evidence. Decisions relating to problem definition and plan implementation are based upon the client's behavior and scientific findings regarding behavior change. Fifth, behavioral consultation defines problems as being outside the skin of the client. In behavioral consultation, a consultant does not say: "Dan's problem is that he is emotionally disturbed" or "Jeff's problem is that he is retarded." These statements contain attempts to describe Dan and Jeff, but they do not specify what Dan and Jeff's problems are. To say that Dan is emotionally disturbed or that Jeff is retarded does not indicate in any precise way what

their current behavior is or specify standards of cceptable behavior toward which they might aspire. Sixth, behavioral consultation emphasizes the role of environmental factors in controlling behavior. As such, behavioral consultants employ respcndent, operant, and modeling procedures to change behavior. The huge quantities of basic and applied research that have been amassed in behavioral psychology suggest that it is possible to bring about marked changes in behavior by altering environmental conditions. Seventh, evaluation of the effectiveness of behavioral consultation focuses upon goal attainment and plan effectiveness rather than on the individual characteristics of the client. This approach emphasizes what the participants in consultation have accomplished rather than what is wrong with the client. It makes psychological reports in consultation a source of information about how to solve problems rather than a repository of page after page of narrative on the defects of the client (Bergan, 1977).

CHAPTER 3

Stages and Verbalizations in Behavioral Consultation

Behavioral consultation takes place in a series of four interrelated stages: 1) Problem Identification, 2) Problem Analysis, 3) Plan Implementation, and 4) Problem Evaluation. The consultant guides the consultee through each of these stages by a series of behavioral interviews in which specific objectives must be accomplished before consultation can progress to subsequent stages. The purpose of this chapter is to present a brief overview of each of the four stages of behavioral consultation and to provide the reader with information regarding requisite verbal behavior on the part of consultants to guide consultees through these stages.

Stages in Behavioral Consultation

Each of the four stages of behavioral consultation has a specific focus and a number of objectives which must be met for consultation to be successful. The first stage, problem identification, is a critical stage of consultation because it sets the occasion for a behavioral perspective on the client's problems and emphasizes the role of current environmental events as being primarily responsible for problem behavior. The major goals of problem identification are to define the problem behavior in behavioral (operational) terms, to get an estimate on the frequency or intensity of the behavior, and to tentatively identify environmental events surrounding the problem behavior.

The purpose of problem analysis, the second stage of consultation, is to validate the existence of a problem, to identify those factors which may influence problem solution, and to develop with the consultee an intervention plan to effect a solution to the problem.

During plan implementation, the consultant makes sure that the intervention plan is implemented as agreed and is functioning properly. Although plan implementation is primarily the responsibility of the consultee, the behavioral consultant serves a monitoring function regarding details of implementation.

The last stage of behavioral consultation is problem evaluation. The purpose of problem evaluation is to objectively evaluate the outcomes of plan implementation. This is done by examining with the consultee the data collected during consultation and is typically validated through the use of single case experimental designs (e.g., reversal, multiple baseline, changing criterion, etc.).

The success of behavioral consultation depends upon the consultant's ability to guide the consultee through each of the four stages of consultation. Each of these stages will be discussed in greater detail in subsequent chapters of this handbook. An essential prerequisite for successfully going through these stages is the consultant's judicious use of verbal behavior during behavioral consultation interviews. These verbal behaviors will be discussed in the following section.

Verbal Behavior in Behavioral Consultation Interviews

Behavioral consultation is almost exclusively a matter of verbal interchange between a consultant and a consultee. Since the consultee works directly with the client's problem behavior, the only way the consultant can gain knowledge about client behavior (other than direct observation) is through the consultee's verbal behavior. The skilled behavioral consultant uses verbal behavior to identify target behaviors, to identify environmental conditions surrounding target behaviors, to summarize and validate the existence of problem behaviors, to communicate details of intervention plans, and to validate the success of intervention plans. Given this exclusive reliance upon verbal behavior, there must be a means of classifying these verbal behaviors into manageable units for summarization and statistical analysis.

Bergan and Tombar (1975) developed a Consultation Analysis Record (CAR) for classifying verbalizations in consultation (see Figure 3-1). Verbalizations in consultation can be categorized into four broad categories. These categories are as follows:

1) Source which describes who is talking in consultation (the consultant or consultee),
2) Content which describes what is being talked about in consultation,
3) Process which describes how the content is being talked about, and
4) Control which identifies the verbalization as to whether it is a question or a statement.

Each of these categories and several of the most important subcategories relative to each will be discussed in this section.

Verbalizations

Perhaps the most important skill for the behavioral consultant to learn is the judicious use of his/her verbal behavior. Essentially, behavioral consultation is asking the right questions, about things, at the right time. Therefore, the behavioral consultant must learn the appropriate content to be discussed in consultation, the appropriate verbal processes or ways of discussing the content, and to effectively control the flow of information in consultation.

Message source. Usually, only a consultant and a consultee are involved in behavioral consultation interviews. Consultants may be anyone who has the responsibility to provide services to a change agent (e.g., a parent or teacher). Consultants are designated as such because they possess specialized knowledge in an area of psychology (i.e., learning and behavior change principles) which consultees desire. Consultees, by contrast, are those persons who function as change agents for client behavior and who seek the advice of a consultant regarding behavior change.

Message content. Consultants and consultees can conceivably talk about an unlimited range of topics in consultation. Typically, the topics discussed relate primarily to aspects of the client's behavior. Message content is divided into seven subcategories for analysis of verbal content (see Figure 3-1). From a behavioral consultant's standpoint, the most

important of these subcategories are behavior setting, behavior, observation, and plan.

Verbalization in the behavior setting subcategory refers to antecedent, sequential, and consequent conditions surrounding a child's behavior. The consultant focuses upon behavior setting verbalizations because the setting in which behavior takes place is known to influence the frequency, rate, or duration of many behaviors. By concentrating on the setting in which problem behavior occurs, the consultant essentially forces the consultee to talk about current environmental events affecting behavior rather than remote environmental conditions (see the background environment subcategory in Figure 3-1).

Several examples of verbalizations in the behavior setting subcategory may be useful. The following are examples of behavior setting verbalization:

"Did Dave try to get your attention just before he tore up his math paper?" (antecedent condition)

"What time of day is your class most disruptive?" (sequential condition)

"What do you do just after Pam's whining behavior?" (consequent condition)

Notice that the above behavior-setting verbalizations relate to current environmental factors rather than remote background-environmental factors

(e.g., questions about family background, developmental milestones, etc.). The importance of focusing upon immediate rather than remote environmental influences is that we can control the former--not the latter. Thus, dwelling upon variables over which we have no control is a futile and time-wasting endeavor.

Verbalizations in the behavior subcategory deal primarily with the overt, directly observable aspects of a child's behavior. The purpose of behavior verbalizations is to get the consultee to operationally define or describe a child's behavior so that it can be assessed directly. The following verbalizations fall into the behavior subcategory:

"What are some examples of the things Frank does to show his poor self concept?"

"What does John do to show that he is immature?"

"Tell me about Larry's lying behavior."

The observation subcategory refers to verbalizations about the collection of baseline data, behavioral recording procedures (e.g., frequency, rate, duration, etc.), and other data collection techniques. Verbalizations in this category are extremely important in documenting the existence of a problem and evaluating the outcomes of interventions. The following are examples of observation verbalizations:

"How could we measure the amount of Dave's disruptive behavior in class?"

"Can you count the number of math problems Jane attempts and the accuracy of her math work?"

"The duration of Julie's temper tantrums decreased from 5 minutes to 1 minute this week."

Plan verbalizations are those utterances that refer to behavior-change strategies discussed in consultation. They may take the form of general plan strategy verbalizations (e.g., "Social reinforcement may be one way to increase Wilbur's interaction with peers") or specific plan tactic verbalizations (e.g., "I could verbally praise Stan in front of the class for working independently on his math problems"). Plan verbalizations in behavioral consultation will typically refer to operant and/or social learning techniques designed to change behavior (e.g., reinforcement, response cost, overcorrection, live modeling, etc.).

Summary of Content Categories

The four content subcategories of behavior setting, behavior, observation, and plan are the most important ones for the behavioral consultant to use while interviewing teachers. Depending upon the stage of consultation, the frequency of verbalizations in each subcategory will shift. Verbalizations important for problem identification, problem analysis, and problem evaluation interviews will be discussed in subsequent portions of this handbook. For a more in-depth discussion of verbalizations in the content category see Bergan and Tombari's (1975) article in the last portion of the handbook.

Message Process

The message process category describes the content of verbal messages occurring during consultation interviews. In other words, the process is simply how the content is being talked about. This content is described mainly, but not exclusively, in sentence verbs (Bergan, 1977). The most important process subcategories are specification, summarization, and validation.

Specification provides or calls for descriptive or definitional information about the various content subcategories under discussion in consultation (Bergan, 1977). Specification is the most important process subcategory to be used in consultation because it underlies the whole purpose of behavioral consultation--to define or specify problems in operational terms so that they can be dealt with. Specifications can be about behavior-settings ("What happens just before Amy has a temper tantrum?"), behavior ("What are the prerequisite math skills Tom would have to possess in order for him to succeed in your class?"), observation ("Can you begin the frequency counts tomorrow?"), or plan ("You could use positive practice over correction to decrease Ron's messy spelling papers."). At all stages of behavioral consultation, school psychologists should have a relatively large number of verbalizations in the specification process subcategory.

The purpose of the summarization process subcategory is to review information discussed earlier in the interview. Bergan (1977) maintains that summarization serves as a kind of rehearsal which reinstates previously

discussed material and thereby reduces the chances that it will be forgotten. Summarizations can be made across the behavior setting ("You said that Tim's out-of-seat behavior was more frequent during reading than during math."), behavior ("You said that Max's aggressive behavior consisted of poking, hitting, scratching, and hair pulling"), observation ("We agreed that you would count the number of correctly spelled words for your class this next week"), or plan ("We've agreed to use peer modeling to increase Tracy's interactions with others). Summarizations not only serve to rehearse previously discussed material but they also serve a rapport-building function between the consultant and consultee. Client-centered therapists have used summarization statements for years to increase rapport between themselves and their clients.

Validation verbalizations provide or call for agreement (positive validation) or disagreement (negative validation) regarding matters of fact (Bergan & Tombari, 1975). The major purpose of validation is to establish agreement between the corsultant and consultee. A useful way of judging whether or not a verbalization is a validation is that it can always be answered with a "yes" (positive) or "no" (negative) reply. Validations can also be about behavior setting ("Is it true than Ron only has bowel accidents before going to school?"), behavior ("Did you say that Mary's shyness involved lack of eye contact?"), observation ("Did you agree to count the number of talk outs for 5 days?") or plan ("Are you going to use the DRL procedure to reduce class disruptions?").

The message process category is an important one because the way in which a consultant talks about problems presented by teachers determines whether or not the consultation will be successful. See the Bergan and Tombari (1975) article for a fuller description of message process.

Message Control

This category of verbalizations classifies verbal behavior as to whether it is likely to have a direct effect on the verbal behavior of the listener. Verbalizations that are likely to have an effect on the listerer's subsequent verbal behavior are called elicitors. Elicitors typically take the form of questions (e.g., "What does Linda do to show her poor self concept") or imperatives (e.g., "Tell me more about Jim's reading skills"). Consultants must control the direction of consultation on interviews. This is done by using a large number of questions and/or imperatives (elicitors). Thus, most of your verbalizations as consultants should be questions (or imperatives) about behavior setting, behavior, observation, and plan content categories. Also, most of your questions should be in the specification and validation process subcategories.

Verbalizations that provide information about the content discussed in consultation are called emitters. Emitters are simply declarative statements which can be about behavior setting ("Bob cries more in the morning than in the afternoon"), behavior ("Tommy's hyperactive behavior involves out-of-seat, squirming, and looking around the room."), observation ("I took baseline data for 4 days"), or plan ("The DRO procedure really worked

well!"). Consultants use relatively fewer emitters than elicitors. In other words, since consultants must ultimately control what is focused upon in consultation, they must do this by asking questions (elicitors) about the right things (behavior setting, behavior, observation, and plan) at the right time (during problem identification and problem analysis).

Summary

In order to have effective behavioral interviewing skills, you must practice the types of verbalizations discussed in this chapter. Initially, you will feel awkward in trying to recognize or produce the types of verbalizations discussed in this chapter. Bergan (1977) recommends two types of practice in developing behavioral interviewing skills: 1) recognition practice and 2) production practice. Being able to recognize the types of verbalizations in consultation is important because it can give you ideas for working with teachers more efficiently and effectively. Some teachers, for example, tend to focus upon background environment (e.g., home life, parents marital status, etc.). If your interview reflects this focus, then the chances that you will adequately define problem and will develop an effective intervention plan are greatly decreased.

Complete the following practice exercises with your workshop leader.

Psychologists_____ Case Number_____

Change Agent_____ Interview Type_____

CONSULTATION ANALYSIS RECORD

	Message Source		Message Content								Message Process								Message Control	
	Consultee	Consultant	Background Environment	Behavior Setting	Behavior	Individual Characteristics	Observation	Plan	Other		Negative Evaluation	Positive Evaluation	Inference	Specification	Summarization	Negative Validation	Positive Validation		Elicitor	Emitter
1																				
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
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17																				
18																				
19																				
20																				
21																				
22																				
23																				
24																				

Practice Exercises - Verbalizations

I. Recognition Practice: Identify the following verbalizations according to the content, process, and control subcategory to which they belong.

Verbalization	Classification
1. "Can you tell me about Vicki's disruptive behavior in your class?"	_____
2. "Dan's aggressive behavior seems to occur more often when he is sitting beside Alan and Jerry."	_____
3. "Could you count the number of times Jane gets out of her seat?"	_____
4. "How could you use overcorrection to decrease Jan's paper throwing?"	_____
5. "Bill is really a bright student."	_____
6. "Nancy comes from a low SES home in which the father is not present."	_____
7. "You said that Mary is on-task more during reading than math and that her off-task behavior consists of looking around, playing with her pencil, and whispering to others."	_____
8. Did you say to write down how long John's temper tantrums last?"	_____

II. Production Practice: Write down examples of the following verbalizations:

a) Behavior - Setting Specification Elicitor

b) Behavior Summarization Emitter

c) Observation Specification Elicitor

d) Plan Specification Elicitor

e) Behavior-Setting Validation Elicitor

f) Plan Summarization Emitter

g) Behavior Specification Elicitor

h) Observation Summarization Emitter

i) Observation Validation Elicitor

j) Behavior Validation Elicitor

CHAPTER 4

Problem Identification Interview

Problem identification is the most important stage of the behavioral consultation process in that the greatest impact of consultation takes place during the problem identification phase. Problem identification sets the course for the entire consultation process and communicates to consultees what is going to be focused on and how the problem will be conceptualized (i.e., behaviorally). Several studies have demonstrated the importance of problem identification in the consultation process (see Bergan & Tombari, 1976; Curtis & Watson, 1980; Tombari & Bergan, 1978).

Using a sample of 806 children (Grades K-3) who had been referred for psychological services, Bergan and Tombari (1976) had 11 well-trained[1] behavioral consultants provide consultation services to teachers whose students were experiencing academic and behavior problems. Problem behaviors included physical assault, disruption, not following rules, academic deficits, and social skills deficits. Using a series of multiple regression analyses, Bergan and Tombari found that the single best predictor of whether or not an intervention plan would be implemented was successful problem identification (R = .776). In other words, over 60% of the variance in plan

[1]These psychologists had gone through intensive training in behavioral consultation at the University of Arizona as part of a federally funded Follow Through Project.

implementation was accounted for by simply identifying the problem to be solved during a problem identification interview. Moreover, it was also found that the effectiveness of consultants' interviewing behaviors (i.e., verbalizations mainly in the content subcategories of behavior-setting, behavior, observation, and plan and the process subcategoires of specification, summarization, and validation) had their greatest impact on the problem-solving process at the problem identification phase.

This study has significant implications for the behavioral consultant. When a consultant lacks behavioral interviewing skills, there is a high probability that problem solving in consultation will never take place. It is imperative that problems be adequately defined during consultation.

The Problem Identification Interview (PII) plays a pivotal role because it sets the stage for either a behavioral or medical model perspective on the child's problem. The behavioral perspective emphasizes the role of immediate environmental events as the primary cause of the child's problem. Teachers, parents, and school psychologists can usually control or change immediate environmental events. By contrast, the medical model stresses remote environmental events and internal characteristics as determinants of behavior. Consultants and consultees have relatively little influence over these remote events.

A study by Tombari and Bergan (1978) bears out the importance of taking a behavioral perspective during problem identification. Teachers were given

either behavioral cues (e.g., "When does this behavior typically occur in your classroom?") or medical model cues (e.g.,"When does _____'s problem typically manifest itself?") during consultation interviews. Tombari and Bergan found that cue type (behavioral versus medical) exerted a substantial influence on teacher expectancies concerning their ability to solve the problem presented in consultation (rated on a 7-point scale of probable/improbable). Expectancies, in turn, strongly affected teachers' ability to define the problem (written definition of a child's problem categorized as behavioral or medical model). This study strongly suggests that verbalizations focusing on behavior and behavior setting are predictive of teachers' ability to define problems and lead to more positive expectations concerning their ability to solve problem behaviors. Another way of interpreting this study is that when a behavioral perspective is taken--teachers tend to develop stronger efficacy expectations (Bandura, 1977). That is, they come to believe that they can implement a plan or course of action that will change or alter problem behaviors (i.e., they develop a sense of self-efficacy). In contrast, when a medical model perspective is taken--teachers do not develop this sense of self-efficacy. Moreover, they probably develop negative outcome expectations (i.e., they believe that the outcome of consultation will not help in solving their problems).

The behavioral perspective on a problem is more likely to result in collection of baseline data and a commitment to pursue consultation through subsequent phases. The medical model, on the other hand, provides little

direction for collection of precise data related to the problem and is less likely to result in specific classroom interventions. Thus, the subsequent phases of consultation are less likely to be pursued. Failure, then, on the part of a behavioral consultant to elicit a behavioral definition of the problem during the PII will, in all probability, end the consultative relationship.

Objectives for the PII

There are six objectives for the PII. Behavioral consultants must meet all six of these objectives in order to adequately define problems presented in consultation.

First, consultants must specify the problem to be solved in consultation. In other words, consultants must elicit from teachers the goals they have in mind for consultation. Objective identification of goals is brought about by the use of verbalizations relating to behavior and in the content category and by the use of specification verbalizations in the process category.

Teachers may identify several goals of consultation. For example, a teacher might identify a child's daydreaming, off-task behavior, lack of work completion in math, and disruptive behavior as problems. The behavioral consultant in this case may ask the teacher to rank these behavior problems from most disturbing to least disturbing. A more effective approach, however, would be to select the target behavior that would lead to the greatest amount of behavior generalization. In this case,

the consultant should select math completion as the target behavior because daydreaming, off-task, and disruptive behavior are all incompatible with working diligently on math assignments. Thus, by selecting math completion as the target behavior, you are likely to get four behaviors changed for the price of one!

The second objective of the PII is eliciting an objective description of target behaviors. This is related to the first objective in that the consultant uses behavior specification questions (elicitors) to obtained objective, clear descriptions of child behavior. For example, a teacher might say, "What really bothers me about Jeff is his immaturity." Behavioral consultants would elicit an objective description of immaturity by asking, "What are some of the things Jeff does to show his immaturity?" As you can see, this question forces the teacher to identify specific behaviors which she/he considers immature. Getting problems defined in behavioral terms so that you and the teacher can both agree on the nature of the problem leads to more effective and efficient steps toward problem solution.

A third objective of the PII is to identify the environmental conditions surrounding the target behavior. Consultants elicit from consultees dsscriptions of events that come before (antecedents), during (sequential), and after (consequent) the problem behavior. This is done by behavior-setting specification questions. For example, a consultant might ask, "What usually happens just before Ted gets out of his seat?" "Does Ted get out of his seat more during math than during reading?" and "What do you do just

after Ted gets out of his seat?" These three questions all relate to the conditions surrounding Ted's out-of-seat behavior (antecedent, sequential, and consequent, respectively).

The fourth objective of the PII is to have the teacher estimate the frequency, intensity, and/or duration of the problem behavior. The purpose of this objective is to give the consultant some notion of the severity of the problem behavior. This, in part, will determine the length of baseline data in that more severe problems (severely aggressive behaviors or school phobia) will need to be attended to more quickly thus shortening the number of baseline days.

The fifth objective is to agree on the type of data collection procedures which will be used (frequency, direct evidence, duration, etc.) and who will collect the data. You will want teachers to collect data if at all possible because of the time savings for you and, perhaps more importantly, it gets the teacher involved in the problem solving process. Because teachers will be collecting baseline data, it is extremely important to use the simplest recording procedure possible that will yield the most valid data. Many times there is a tradeoff between optimal recording procedures and practical recording procedures. Practical recording procedures are frequency, duration, direct evidence, and some time-sampling methods. Remember to use the appropriate procedure with the appropriate behavior. For example, you cannot measure "off-task" behavior with frequency recording and you are likely to underestimate behavior rates with

relatively long time-sampling intervals (e.g., at the end of 10 minute intervals), particularly with high rate behaviors.

The final objective of the PII is to set a date for the next interview. The time that elapses between the PII and the next interview (Problem Analysis Interview) will depend upon the number of days the teacher will collect baseline data. This, in turn, depends upon the nature and severity of the problem behavior and the stability of baseline data. An optimal length of baseline is about 5 days and certainly no less than 3 days.

Outline and Examples of PII

The Problem Identification Interview (PII)

A. Purposes of PII

Define problem(s) in behavioral terms

Tentative identification of conditions around the behavior

antecedent, situational, consequent

Tentative strength specified - how often or severe at

present vs. acceptable level

Establish procedure for collection of baseline data -

sampling plan, what, who, how behavior is recorded, etc.

Detection of irrational ideas

B. Essential Interviewing Behaviors

Consultant initiated questions/comments on

1. Directional question to introduce discussion of problem:

   e.g., "Describe Diane's hyperactive behavior."

   "Let's see, you referred Johnney because of his poor self-concept, lack of progress, and rebellious behavior. Which of these do you want to start with. . .?" Describe Johnny's rebellion (self-concept or lack of progress) in the classroom.

2. Examples of behavior question(s)

   e.g., "What does Charles do when he is hyperactive?"

   "What does Mary do when she is disrespectful?"

3. Preceding conditions questions

   e.g., "What happens before Mary makes an obscene gesture to the rest of the class?"

   "What happens before Egbert begins to hit other children?"

4. Situational conditions question

   e.g., "When does Mary . . .Who is Mary with . . . What is Mary supposed to be doing when . . ."

5. Consequent conditions questions

   e.g., "What happens after Mary . . ."

   "What do the other students do when Charles climbs on the radiator?"

   "What do you do when Egbert hits other children?"

6. Frequency/severity question

   e g., "About how often does Patrick refuse to do his homework?"

   "How many times each day/week does Charles race about the room?"

7. Tentative definition of goal - question

   e.g., "How often would Patrick have to turn in his work in order to get along OK?"

   "How frequently could Charles leave his seat without causing problems?"

8. Assets question

   e.g., "Is there something that Mary does well?"

9. Question about approach to teaching or existing procedures

   e.g., "How long are Charles and the other students doing seat work problems?" What kind of . . .?"

10. Summarization statement and agreement question

    "Let's see, the main problem is that Charles gets out of his seat and runs around the room during independent work assignments. He does this about 4 times each day, and . . ., etc. Is that right?"

11. Directional statement to introduce discussion of data recording

    "We need some record of Sarah's completion of homework assignments . . . how often assignments are completed, what assignments are completed, . . ., etc. This record will help us to determine how frequently the behavior is occurring, and it may give us some clues about the nature of the problem. Also the record will help us decide whether any plan we initiate is effective or not."

12. Question about data recording and conditions "How would it be most convenient for you to keep a record of Charles' out of seat behavior?"

    "What would you record?"

    "When would you record?" - How often?"

13. Summary statement

    "Let's see now, you'll record the number of times Danny hits other students in the hall - you'll record this in the morning before school and at noon, and you'll keep a record for one week."

Practice Exercises: Problem Identification Interview

A. As a group, have a brainstorming session in which you will give the workshop leader typical problem cases you have encountered while working with teachers. The workshop leader will write your problem behaviors on the blackboard. You can give academic as well as social behavior problems. After generating these problem behaviors, do the following:

1) Split up into triads. Select one of the generated problem behaviors.
2) Designate one person as consultant, one as consultee, and one as a observer/recorder.
3) Conduct a Problem Identification Interview. The consultee will have to "make up" answers to many of the consultant's questions. Make the interview about 7-8 minutes.
4) The observer/recorder should use the PII Checklist to record the verbalizations of the consultant.
5) Switch roles such that everyone has a chance to be the consultant.
6) Designate one person to be the spokesperson for the group. This spokesperson will report back to the larger group on the effectiveness of the PII. As a group (triad), you should record the number of verbalizations in each of the categories listed on the PII Checklist.
7) Spokespersons should also state whether or not consultants met all 6 objectives of the PII.

8) Your workshop leader will discuss with the group the outcomes of various PIIs and your perceptions of the PII. Your participation is important.

B. Information Problem

1) List the 6 objectives of the PII

2) What evidence is there that the PII is the most important phase of behavioral consultation?

3) What are the advantages of verbalizations relating to behavior, behavior setting, and observation as opposed to other content areas?

4) What are some considerations in selecting appropriate target behaviors and recording procedures for these target behavfors in consultation?

5) Write one example of each of the following:

a) Behavior Specification Question

b) Behavior-Setting Specification Question (antecedent)

c) Behavior-Setting Specification (sequential)

d) Behavior-Setting Summarization Question (consequent)

e) Observation Specification Statement

f) Behavior Validation Statement

*If you have difficulty with any of these questions, go back and reread Chapters 3 and 4.

Problem Identification Interview Checklist adapted from
Bergan, J. R. Behavioral Consultation, Merrill, 1977

Required Verbal Units	Frequency of Use
1. Behavior Specification Elicitors i.e., Questions calling for Examples of Behavior	
2. Behavior-Setting Specification Elicitors (Consequent Conditions) i.e., Questions on Antecedent Conditions	
3. Behavior Setting Specification Elicitors (Consequent Conditions) i.e., Questions on Consequent Conditions	
4. Behavior Setting Specification Elicitors (Sequential Conditions) i.e., Questions on Situational Conditions	
5. Behavior Specification Elicitors (Strength) i.e., Questions on Frequency/Severity	
6. Behavior Summarization Emitters i.e., Summarization Statement on Behavior	
7. Behavior Setting Summarization Emitters i.e., Summarization Statement on Conditions	
8. Behavior Specification Positive Validation Elicitor i.e., Questions asking for Agreement	
9. Behavior Setting Positive Validation Elicitors i.e., Questions asking for Agreement on Conditions	

10. Observation Specification Elicitors
    i.e., Questions on Record Keeping
    Procedures _____

11. Observation Summarization Emitters
    i.e., Statements on Record Keeping
    Procedures _____

12. Observation Validation Elicitors
    i.e., Questions asking for Agreement
    on Record Keeping _____

13. Other Specification Elicitors or
    Emitters
    i.e., Other Statements or Questions _____

CHAPTER 5

Problem Analysis Interview

Problem analysis takes place after adequate baseline data have been collected on the problem identified in the PII. The consultant's task during problem analysis is to help the teacher identify variables that could influence the solution of the problem and to assist the teacher in utilizing those variables (manipulating them) in designing a plan to change behavior.

Problem analysis has two phases: 1) The analysis phase and 2) The plan-design phase (Bergan, 1977). During the analysis phase, the consultant focuses upon the conditions that might influence behavior. Recall from problem identification that consultants should focus upon the behavior-setting content. Behavior setting refers to the antecedent, sequential, and consequent conditions surrounding behavior. Thus, during the analysis phase, you should concentrate on the conditions surrounding problem behavior to determine what may be maintaining it. During the plan design phase, consultants develop with teachers plan strategies that can be used to achieve the goals of consultation. After a general strategy has been agreed upon, specific plan tactics to be used in implementing the strategy are specified. Plan strategies and tactics will be discussed more fully in a subsequent section of this chapter.

Objectives for the PAI

There are four objectives for the PAI. All four of these objectives must be met in order to adequately analyze the conditions surrounding behavior and to design a plan to change target behaviors.

Problem validation is the first objective of the PAI. In problem validation, the consultant determines the adequacy of baseline data collected by the teacher. You may find that only one or two days of data have been collected when you and the teacher agreed that six days would be collected. In this case, there would not be adequate data to confirm the existence of a problem. Your response to this situation should be a request for the teacher to collect more data (e.g., "We need a few more days of baseline data before we can develop a plan for Dan's disruptive behavior."). Another situation could arise in which the teacher took only frequency data when you had requested both frequency and duration data (e.g., in the case of temper tantrums). Again, you should request more baseline data for both frequency and duration of tantrums.[1]

Another goal of problem validation is to determine the discrepancy between existing performance and desired performance of the child. For example, assuming the baseline data are adequate, the teacher reports that a child is disruptive (talks out, hits, etc.) six times during a 25-minute out, hits, etc.) six times during a 25-minute math lesson. You should ask

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[1]In a case like tantrum behavior, your plan could very well decrease the duration of tantrums but not the frequency. If you only collected frequency data, you and the teacher may falsely conclude that your plan did not work.

the teacher what he/she would regard as an acceptable number of disruptions during the math lesson. Most teachers would probably say zero disruptions are the only acceptable goal. This, of course, will vary according to the nature of the problem behavior. There are some behaviors that are simply too frequent, but the goal would not be to completely eliminate them (e.g., offering answers to questions in class, talking to peers, etc.). In summary, the goals of problem validation are two fold: 1) determining the adequacy of baseline data and 2) determining the existence of a problem. There will be times when baseline data will be inadequate (e.g., not collected, collected improperly) or when the teacher will realize the problem is not as great as first thought. In either case, your job is to validate the existence (or nonexistence) of a problem based upon objective information (i.e., adequate baseline data).

The second objective of the PAI is to analyze the conditions surrounding the problem behavior. Psychological research indicates that there are a number of conditions that can affect behavior (Bergan, 1977). In behavioral consultation, your goal should be to identify the antecedent, sequential, and consequent conditions occurring in close temporal contiguity to the problem behavior. Thus, in problem analysis, a large number of your questions to the consultee should be in the behavior setting content category (see Chapter 3). There are a number of antecedent, sequential, and consequent conditions that serve to increase, maintain, and/or decrease behavoir. Table 5-1 lists some of these conditions.

Table 5-1

Conditions Affecting Behavior

Antecedent	Sequential	Consequent
1. Cues, instructions, or information given to student	1. Repetition or drill	1. Positive reinforcement contingent upon behavior
2. Other children in class that occasion a target child's disruptive behavoir (S^d_s)	2. Schedule of reinforcement	2. Negative reinforcement (removal of or escape from an aversive stimulus)
3. Type of academic material being presented (e.g., reading, math, etc.)	3. Number of responses required of child	3. Punishment-based conditions (response cost, timeout, overcorrection, etc.)
4. Modeling stimuli (other children in class)	4. Massed versus distributed practice	4. Strength of an aversive stimulus (e.g., 5 minute overcorrection, 10 minute overcorrection, etc.)

These are just a few of the many conditions that affect behavior. In consultation, teachers usually want one of two things: 1) to decrease the frequency or magnitude of behavior or 2) to increase the frequency or magnitude of behavior. Your job is to identify conditions in the child's immediate environment that are maintaining or are failing to maintain the target behavior(s). Once you and the consultee have identified these conditions, you can then move to the plan design phase of problem analysis.

The third objective of the PAI is to design an intervention plan to alter the target behavior(s). There are two subgoals of plan design: 1) development of plan strategies and 2) the identification of plan tactics. Plan strategies are general approaches or possible courses of action that may be adopted to effect a solution to problems in consultation. Plan strategies do not specify exactly how a technique may be applied, but rather they provide information on what general procedures might be effective (e.g., reinforcement, punishment, etc.). Examples of plan strategy verbalizations are: "You could use a reinforcement approach to increase Bill's academic behavior." "Would it be possible for you to use a response cost procedure?" etc.

Plan tactics, on the other hand, refer to precise descriptions of how the general plan strategies are to be put into effect. Plan tactics include descriptions of procedures and materials to be used in implementing a consultation plan as well as specification of who is to carry out the tactic (Bergan, 1977). Consultees are much more likely to identify resources they could use in carrying out an intervention plan if the consultant asks them

how rather than tells them how they could use resources. A study by Bergan and Neumann (1980) illustrates this nicely. These authors analyzed 50 problem analysis interviews recording the frequency of plan tactic questions versus plan tactic statements (i.e., the consultant telling them what to do, how to do it, and under what conditions to do it). Bergan and Neumann found that the greater the frequency of consultant plan tactic questions, the greater the frequency of consultee verbalizations about resources which could be used in implementing a plan. By the same token, the greater the frequency of consultant plan tactic statements, the less likely the consultee was able to identify resources that could be used in implementing a consultation plan. In specific terms, when consultants ask teachers how they might implement a particular procedure to solve a problem (i.e., token system, response cost, praise, etc.), the odds that they will identify a way of carrying out a procedure are 14 times greater than if the consultant just simply told them what to do. The implication of this study is that you are much more likely to achieve cooperation from teachers in carrying out a plan if they (the teachers) identify plan tactics themselves. It is unclear why this is the case, but it may have to do with teachers feeling they are an equal participant in the problem solving process and thus more inclined to identify plan tactics. Another explanation is that teachers may enhance their sense of self-efficacy (Bandura, 1977) if they perceive themselves as competent in identifying plan tactics. Self-efficacy theory would predict that the more direct involvement teachers have in an intervention, the higher their efficacy expectations (i.e., the more they would come to

believe that they had the skills to bring about behavior change). Table 5-2 lists some examples of plan tactic questions versus plan tactic statements. Remember, you should use plan tactic questions when possible.

Table 5-2

Plan Tactic Questions	Plan Tactic Statements
1. "How might you reward Jim for doing his homework?"	1. "You should establish a home-based point system whereby Jim could earn points for homework completion."
2. "How could you implement the overcorrection procedure for Bill's destructive outbursts?"	2. "You could make Bill apologize to everyone in the class and have him clean up the room 5 times for each destructive outburst."
3. "How might you adopt your teaching style so that Gwen could be more successful in your math class?"	3. "You could provide more drill and verbal praise for Gwen to increase her math skills."

The final objective of the PAI is to arrange a date for the next interview (Problem Evaluation Interview). You should also make arrangements to monitor the implementation of the plan (e.g., "I'll drop by next week to see how things are going") and make provisions for consultee training in the application of the procedures agreed upon in consultation (e.g., "Would Thursday after school be a good day to go over with you how to conduct the restitutional overcorrection procedure?").

Outline and Examples of PAI

A. Purposes of PAI

-Evaluation of and agreement on sufficiency and adequacy of baseline data

-Tentative functional analysis--discuss antecedent, situational, and consequent conditions

-Discuss and reach agreement on goal for behavior change

-Design an intervention plan including specification of antecedent, situational, or consequent conditions to be changed and who, what, where, when re: The change

-Reaffirm record keeping procedure

-Schedule problem evaluation interview

B. Essential Interviewing Behaviors

1. Directional statement re: data & problem

"Let's look at the record on Jimmy's hitting."

Graph Data

2. Question or statement about strength of behavior "It looks like Jimmy refused to do the assigned work except on Tuesday."

3. Questions about conditions: Antecedent, Situational, Consequent

   "Did you notice anything in particular that happened just before . . ."

   "What was going on when Jimmy . . ."

   "What happened after Mary . . ."

4. Summarizing statement specifying target behavior, conditions and strength: "Let's see, Mary was 'disrespectful' by talking back, or through abusive language on three days last week. This behavior seemed to be related to comments made by other students. We would like to eliminate this behavior and help her produce more positive comments. Is that right?"

5. Question and/or statement interpreting the behavior

   "Why do you think Mary is 'disreseectful'?" or "Perhaps Mary is trying to attract attention and win status in the class by . . ."

6. Questions about the plan

   "We need to try something different. What could be done before Mary usually makes the abusive remarks?" "What could we do to change the setting in which Charles gets into fights?"

   "How could we remove the attention from the disruptive behavior?"

7. Summarize the plan -

   "Then we'll try this . . ."

8. Statement on continuing recording procedure

   Make an informal written agreement on the plan, data recording, etc.

Schedule Problem Evaluation Interview.

Problem Analysis Interview Checklist adapted from

Bergan, J. R. Behavioral Consultation, Merrill, 1977

Required Verbal Units	Frequency of Use
1. Observational Specification Elicitors or Emitters i.e., Question or Statement Directing Attention to Record	_____
2. Behavior Specification Elicitors and Emitters i.e., Questions or Statements re: the Target Behaviors	_____
3. Behavior Summarization Emitters and Positive Validation Elicitors i.e., Statements Summarizing Behaviors and Question re: Agreement	_____
4. Behavior Setting Specification Elicitors (Antecedent, Consequent, Sequential) i.e., Questions about Antecedent Conditions i.e., Questions about Consequent Conditions i.e., Questions about Situational Conditions	_____
5. Behavior Setting Summarization Emitter	

i e., Statements Summarizing Conditions _____

6. Behavior Setting Positive Validation Elicitor
   i.e., Question asking for Agreement on Conditions _____
7. Plan Specification Elicitors
   i.e., Questions about Intervention Plan _____
8. Plan Specification Emitters
   i.e., Statements about the Plan
9. Plan Summarization Emitters
   i e., Summary Statement about the Plan _____
10. Plan Positive Validation Elicitor
    i.e., Question asking for Agreement on Plan _____
11. Observation Specification Elicitors, Emitters, and Positive Validation Elicitors
    i.e., Questions or Statements re: Continuation of Record Keeping Procedure _____
12. Other Specification Elicitors and Emitters
    i.e., Other Statements or questions _____

Practice Exercises: Problem Analysis Interview

A. Using the same problem identified in the PII, each triad should conduct a Problem Analysis Interview (PAI).

1. Designate one person as consultant, one as consultee, and one as observer/recorder.
2. Conduct the PAI. This interview should last about 7-8 minutes.
3. The observer/recorder should use the PAI Checklist to record the verbalizations of the consultant. Observers should pay particular attention to consultant's use of plan tactic specification questions.
4. Switch roles so that everyone has a chance to be the consultant.
5. Designate one person to be the spokesperson for the group. This spokesperson will report back to the larger group on the effectiveness of the PAI. As a group, you should record the number of verbalizations in each of the categories listed on the PAI Checklist. Be sure to report the use of plan tactic specification questions and/or statements.
6. Spokesperson should also report whether or not consultants met all 4 objectives of the PAI.
7. Your workshop leader will discuss the outcomes of the PAIs and your perceptions of the PAI.

B. Information Probe

1. List the 4 objectives of the PAI.
2. Explain the effect of using plan tactic questions on consultee behavior (support your explanation with research evidence).

3) Why do you think that plan tactic questions have the effects they do on consultee behavior?

4) Give an example of antecedent, sequential, and consequent conditions affecting behavior.

5) Discuss the two phases of the PAI and the goals of each phase.

6) Write one example of each of the following:

   a.) Plan Tactic Specification Question

   b.) Plan Strategy Specification Statement

   c.) Plan Tactic Summarization Statement

   d.) Plan Strategy Validation Question

* If you have difficulty with any of these questions, go back and review Chapter 5.

CHAPTER 6

Plan Implementation

Plan implementation is the third stage of the behavioral consultation process. During this stage, the plan that was agreed upon in the PAI is put into effect. The consultant's task during plan implementation is to maximize the probability that the plan will produce the desired outcomes (Bergan, 1977).

It is important for the participant in consultation to be aware of the roles they are to play. Typically, the consultant fulfills the role of implementation coordinator which involves overseeing plan operation scheduling plan-implementation activities, and specifying nature of plan activities. The consultee usually plays the dual roles of plan executor and observer since they are the persons primarily responsible for putting the plan into effect and collecting data on child behavior during intervention. There may be instances when others may assume primary responsibility for plan execution and/or observation (e.g., teacher aides, volunteers, etc.).

Consultation during plan implementation differs from the other stages of consultation in that there is no formal interview. While there is no formal interview, the consultant usually effects smooth implementation of the plan through brief contacts with teachers. Brief contacts usually last on 5 to 10 minutes and occur between the consultant and the consultee. Brief contacts usually have three functions: 1) to assist in monitoring

implementation of the plan, 2) to assist in making plan revisions, and 3) to inspect the data shortly after the plan has been implemented. Obviously, the purpose of these functions is to ensure the smooth implementation of plans, to make minor modifications in the plan if needed, and to look at data to see if the plan is working. Brief contacts can take place in almost any setting or situation (e.g., teacher's lounge, hallway, lunch, telephone, etc.).

Objectives of Plan Implementation

Although there is no formal interview during plan implementation, there are several objectives for this stage of consultation. While implementation of the details of the plan is the responsibility of the consultee, the consultant cannot take a "wait and see" approach. At this time, the consultant must take care that the plan is implemented as desired and is functioning as anticipated.

The first objective of plan implementation is to determine if the consultee possesses the skills to implement the plan. An example would be if a teacher was going to use a timeout procedure to decrease a preschooler's aggressive behavior. It is the consultant's responsibility to determine whether or not the teacher knows the correct application of timeout procedures (e.g., statement of contingency, temporal considerations, duration of timeout, verbal behavior going to and coming from timeout, etc.). Consultants can usually determine whether consultees have these skills by analyzing the consultee's use of plan tactic statements during problem analysis. Generally speaking, consultees poobably have the skills

necessary for plan implementation if they generate tenable and logical plan tactics during problem analysis.

If the consultee does not possess the skills necessary for plan implementation, then the consultant must determine the feasibility of conducting skills training. Skills training might involve direct instruction in behavioral techniques such as reinforcement, token systems, verbal reinforcement, and the like. Two studies (Brown, Reschly, & Wasserman, 1974; Nagle & Gresham, 1979) used a "surreptitious" modeling procedure to train teachers in the use of behavioral techniques. In these studies, the researchers went into the respective classrooms and modeled reinforcement and extinction procedures. The results of these studies suggest that school psychologists can serve as effective models for teachers in the use of behavioral techniques in classroom settings. The Nagle and Gresham (1979) study demonstrated changes in both teacher and student behavior as a result of the "surreptitious" modeling procedure. Whenever skill training is necessary, consultants should evaluate the degree of skill mastery by teachers. This can be done by having the teacher describe to you how the procedures will be implemented and/or by directly observing the teacher in the classroom setting. If the teacher still has not mastered the requisite skills, you may have to continue skills training or select another procedure that is easier for the teacher to implement.

Another objective of plan implementation is monitoring of data collection and plan operations. It is usually the consultee's responsibility to

continue taking data on child behavior during plan implementation as it was during problem identification and problem analysis. The consultant's job during plan implementation is to assess whether or not the data is being collected in the same way as during the earlier stages of consultation. This monitoring can be done by brief contacts (in person or by telephone) or brief observations in the classroom. It is extremely important that consultees be consistent in the data collection methods throughout consultation. A change in these procedures from one stage to another makes a valid problem evaluation impossible.

Monitoring plan operations can be done in at least three ways. First, the consultant can conduct a brief interview with the teachers having them describe specific examples of how the plan is being carried out. Second, the consultant may want to briefly observe in the classroom to ensure that the plan is being implemented as specified. A final way to monitor plan operations is to use change (or lack of change) in the child's behavior as an indication of correct plan operations. This is somewhat more indirect and potentially unreliable since changes in behavior could come about independently of the plan. There is no right or wrong way to monitor plan operations under all circumstances. You, as a consultant, must determine the most efficient and valid way of monitoring given your time constraints and other job responsibilities.

A final objective of plan implementation is to determine the need for plan revisions. Obviously, all plans will not work as intended. There are a variety of factors that influence the failure of a plan such as poor implementation, lack of consistency, an inadequate problem analysis, a poor

behavioral assessment, or inaccurate selection of reinforcers to name just a few. Whenever you determine that the plan is working, you and the teacher must revise the plan such that it has a change to work. An example of plan revision may be helpful. Suppose you and the teacher develop a plan to decrease a child's disruptive behavior in the classroom. Your plan includes teacher praise and tokens (points) for nondisruptive behavior. The plan is implemented and monitored, but is not working. Through observation and talking with the teacher you discover that the teacher praise is very general ("Good job") as opposed to specific ("I like the way you're sitting quietly and doing your work.") You also note that the points are exchangeable for trinkets. After making this determination, you and the teacher revise the plan to make praise more specific and change the reinforcers from trinkets and jobs to free time and five minutes extra recess. These changes result in a decrease in disruptive behavior.

The above plan revision did not encompass a change in the procedures used (verbal and token reinforcement). The only changes were in the <u>form</u> of praise (specific as opposed to general) and token reinforcement (activity reinforcers versus tangible reinforcers). Other plan revisoons may involve a complete revamping of the entire plan while others might entail going back to problem analysis. In any event, consultants must be prepared to revise plans when necessary.

Outline for Plan Implementation

I. Assess Consultee's Skills

A. Conduct Interview

B. Observe in Classroom

II. Determine Feasibility of Skill Training

A. Consider Time Constraints

B. Consider Skill Constraints (of consultee)

III. Conduct Skill Training

A. Direct Instruction

B. Readings

C. Modeling

IV. Evaluate Skill Training

A. Teacher Descriptions

B. Observation in Classroom

V. Monitoring

A. Data Collection

1. Brief Contacts

2. Observation

B. Plan Operations

1. Brief interview

2. Brief observation

3. Behavior change

VI. Determine Need for Plan Revisions

A. Assess Form of Implementation

B. Assess Reinforcers and Punishers

C. Make Revisions if Necessary

CHAPTER 7

Problem Evaluation Interview

Problem evaluation is the last stage of behavioral consultation and it is here that the notion of accountability assumes prominence. Problem evaluation takes place after the plan has been in effect for a reasonable period of time.[1] Many plans appear to fail simply because they are not left in effect for adequate periods of time (Bergan, 1977). Consultants must encourage teachers to give plans a chance to work before calling for what may be a premature problem evaluation.

The value of problem evaluation is that it informs the consultant and consultee as to what their next steps will be in consultation. Depending on the results of the problem evaluation interview, the participants in consultation may decide to terminate consultation, to alter the existent plan, or to go back to problem identification and select new goals. Problem evaluation also serves as a feedback mechanism to both the consultant and consultee and involves the production of empirical knowledge of behavior change strategies in classroom settings. In this sense, behavioral consultation provides a blending of service to children and experimentation (Bergan, 1977). Behavioral consultation is one of the few areas in which

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[1]Depending upon the nature of the problem, reasonable period of time may vary from one week to one month or slightly longer.

practitioners can combine the service role with the applied research role in fulfilling their job responsibilities. Grimes (1981) presents a convincing argument calling for more applied research by school psychologists. One of the areas that Grimes mentions for possible research activity is in the evaluation of psychological interventions. This is exactly the function of problem evaluation in behavioral consultation--demonstration of accountability and applied research.

Objectives of the PEI

There are four objectives for the PEI. The first objective is to determine whether or not the goals of consultation have been attained. Determination of goal attainment is based upon the objectives of consultation set forth in consultation and the degree to which the child's behavior approximates those objectives. For example, if the goal during problem identification was to have the child solve 20 two-digit addition problems with regrouping in 5 minutes with 100% accuracy; then problem evaluation would necessarily include an evaluation of the following: (a) number of problems completed, (b) rate, and (c) accuracy. If the child completed the 20 problems in 5 minutes with 85% accuracy, then he/she did not attain the goal set forth in problem identification, but has perhaps moved significantly in that direction (depending upon baseline accuracy level).

Goal attainment in consultation can be conceived of in three categories: (1) goal attained, (2) goal partially attained, or no progress

toward goal. When the evaluation of a plan falls into one of these categories, different courses of action are suggested in consultation. When goals are attained in consultation, the participants may wish to terminate consultation or work on additional problems that the consultee deems important. If the goal is only partially attained, the consultant will usually return to problem analysis to get more information on behavior-setting conditions that may have been overlooked (antecedent, sequential, and consequent). The plan may have to be modified or changed entirely depending upon the degree of movement toward behavioral goals. If no progress whatsoever has been made toward behavioral goals, then the consultant must return to problem analysis and maybe to problem identification. There are a number of reasons why no progress is made in consultation. These include faulty problem identification and problem analysis, unrealistic goals, and even deliberate sabotage by the consultee to ensure that the plan will not work (e.g., when the teacher knows that plan failure is the student's ticket out of his/her room to a special education class). Regardless of the reasons for no progress, it is the consultant's task to effect a reasonable solution so that the child can move toward previously established or alternative goals in consultation. This may involve a reanalysis of behavior, behavior-setting, and plan or it may involve modification of teacher beliefs, perceptions, attitudes, and expectancies regarding the child, the plan, or both (something akin to rational emotive consultation).

The second objective of the PEI is to evaluate the effectiveness of the intervention plan. This is more specific than merely evaluating goal

attainment in that the consultant uses an evaluation design (typically a single-case design) to determine plan effectiveness. Kratochwill (1977) has suggested that school psychologists employ single case research designs that allows for a credible form of evaluating school-based interventions. The following section presents a brief overview of single case or N=1 research designs typically used with school-based interventions. For a more in-depth discussion of these designs see Hersen and Barlow (1976) and Kratochwill (1977).

Single Case Methodology

Much of the single case methodology has grown out of the research in behavior therapy, developmental psychology, and psychotherapy (Kratochwill, 1977). Single case research methodology has been advocated by many over large-group design research (e.g., analysis of variance) because of its relative ease of implementation, its focus upon the individual, and its clarity of interpretation (e.g., detecting daily changes in individuals as a function of baseline and intervention phases). Large group research, particularly in psychotherapy, has been criticised on the grounds that it tends to obscure the effects of intervention for individuals. That is, in most psychotherapy outcome studies, some people get better, some stay the same, and some get worse. When these data are analyzed (using ANOVA procedures), the variance between groups is compared to the variance within groups and significant effects are typically observed (i.e., if the study is to be published). In ANOVA, the between groups variance is maximized (statistically) relative to the within groups variance. Thus, we have no

idea (usually) what the progress of any one individual in a particular treatment is since their data are added into the group data and a mean (as well as variance) is computed. Therefore, the mean for the group is actually a "mythical average" since it usually does not correspond to the performance of any one person within that group (Hersen & Barlow, 1976). Given the many problems, both practical and theoretical, of large group research, the single case methodology is advocated in evaluating the outcomes of behavioral consultation.

An important consideration in any type of research is the notion of internal and external validity (Campbell & Stanley, 1963). Internal validity answers the question, "Was the intervention responsible for the changes in the target behavior?" Without internal validity, proper interpretation of the intervention plan is impossible. Suppose you implement a response cost procedure to decrease disruptive behavior in a high school student. The extent to which you can conclude that the decrease in disruptive behavior (the dependent variable) was due to the response cost procedure (the independent variable) is an indication of the internal validity of the plan. If you started with response cost and after 4 or 5 days added a timeout procedure, you could not conclude whether the change in behavior was due to response cost, timeout, or an interaction of the two. For most practical purposes in the schools, it is adequate to demonstrate that the changes in behavior are due to the plan in general. It is usually not necessary to tease out the independent contributions of each procedure (e.g., response cost, timeout, or response cost + timeout).

External validity answers the questions, "Can I say that the plan will have similar effects on similar children with similar problems (client generality)? or Can I say that other teachers can use the same plan and obtain similar effects (therapist generality)? Will my plan be effective in other settings?" Thus, external validity is an indication of the extent to which you can generalize the effects of the plan across children, teachers, and settings. While important, external validity is not nearly as critical in single case research as internal validity.

Single Case Designs

There are a number of single case research designs, many of which have been developed within the past several years. The simplest single case design is known as the AB Design. This desgin involves the collection of baseline data (A) over several points in time. Subsequent to baseline, an intervention (B) is implemented and data are collected over several points in time. This allows far a comopaison between baseline (A) and intervention (B). The major problem with this design is that it does not control for the feasibility that an event occurring at the same time as intervention may have caused the changes in behavior. Thus, the major problem with AB designs is that they possess poor internal valitity.

A much more internally valid design is the ABAB or reversal design. In this dessgn, a baseline is established (A_1), an intervention is implemented (B_1), the intervention is withdrawn (A_2), and the intervention is

reimplemented (B_2). The major advantage of the ABAB design is that it reduces the probability that extraneous events unrelated to the intervention may have produced the observed changes in behavior (i.e., the design is internally valid). The principal disadvantage of this design is that some behaviors are either not easily reversed (e.g., academic skills) or it would be unethical or impractical to reverse them (e.g., aggressive behavior, profanity, etc.).

The multiple baseline design is a design that does not require a reversal phase and is often used in school settings. Multiple baseline designs can be conducted across subjects, across behaviors, or across settings. In a multiple baseline across subjects, baseline data is taken across several children (say three kids). Next, intervention is implemented for Child 1 and while baseline conditions are in effect for Child 2 and Child 3. After a period of time, intervention occurs with Child 2 while data is still being taken of Child 1 (intervention data) and Child 3 (baseline data). Finally, the intervention is implemented for Child 3. Thus, you have intervention being implemented at three separate points in time while taking continuous data for all children. The degree to which behavior changes as a function of the intervention for each child is an indication that behavior change was produced by the intervention plan (i.e., an indication of internal validity). Multiple baselines may be conducted across behaviors (disruptiveness, aggressiveness, and out of seat) or across settings (several different classrooms, school versus home, etc.).

A relatively new design which is ideal for certain consultation problems is the changing criterion design. In this design baseline data are collected for several days and a baseline average is computed. During intervention (Phase I), a criterion for performance is arbitrarily set. During each successive phase, the criterion for reinforcement is gradually raised (or lowered) until the child is performing at expected levels. Academic problems such as math or spelling accuracy are ideal for changing criterion designs. Suppose a child has a baseline average of 20% accuracy on math problems. During the first phase, you might require 30% accuracy each day for the child to obtain reinforcement. If the child does not obtain 30% accuracy for that day, reinforcement is not administered. Succeeding phases require higher levels of accuracy (40%, 50%, 60%, etc.). This can be applied to a number of problems where the focus is to increase rates or accuracy of academic or social behaviors. This is known as an accelerating changing criterion design.

Changing criterion designs can also be used when the focus of the intervention is to decrease problem behaviors. This is known as a decelerating changing criterion design. For example, this design could be used to decrease the number of disruptive verbal outbursts in class by the entire group. After baseline, you determine that the baseline average of verbal outbursts for the class is 15 per day. For Phase I of intervention, you might award reinforcement for the class if they exhibit no more

than 7 verbal outbursts and so on until the frequency of verbal outbursts is zero. Decelerating changing criterion designs are amenable to the evaluation of plans that use DRL (differential reinforcement of low rates) or DRO (differential reinforcement of other behavior).

In summary, the single case design methodology allows school psychologists to objectively evaluate the effects of intervention plans and makes it possible for them to do practical research in the schools. Most school psychologists will probably opt for the AB design because of its simplicity, however there must be an awareness and consideration of the threats to internal and external validity with this design. An almost equally simple design that is easily applied to a vareity of academic behavior problems for individuals and groups is the changing criterion design. This design is also much more internally valid design than the AB design and should be applied more frequently by school psychologists because of its applicability to school-related problems. Table 6-1 presents uses and sources of invalidity in single case designs.

The third objective of the PEI is to discuss strategies and tactics regarding the continuation, modification, or withdrawal of the plan. After the plan has been evaluated, consultees may want to leave the plan in effect, withdraw the plan immediately, or modify the plan to make it more effective or easier to monitor. The consultant's task during the past implementation planning stage of the PEI is to advise the consultee of the possible effects of altering or withdrawing the plan. For example, if a token reinforcement plan has been in effect and is successful for one week,

Adapted from J. Bergan, Behavioral consultation, Columbus, Ohio: Charles E. Merrill, 1977.

TABLE 6–1. Uses and sources of invalidity for single-group designs

Design Type	Occasions for Use							Sources of Invalidity: Internal Invalidity									Sources of Invalidity: External Invalidity			
	Single-Intervention Studies	with Reversible Behaviors	Multiple-Intervention Studies	Combined-Intervention Studies	with Uncorrelated Behaviors	with Behavior Uncorrelated across Situations	when behavior change will likely follow criterion change	History	Maturation	Testing	Instrumentation	Regression	Selection	Group Composition	Instability	Interaction of Selection and Other Sources	Multiple-Intervention Interference	Testing-Intervention Interaction	Selection-Intervention Interaction	Reactive Arrangements
AB	X							U	C	C	R	C	C	C	C	C	C	U	U	U
ABAB	X	X						C	C	C	C	C	C	C	C	C	U	U	U	U
Single-group multiple intervention			X					U	C	C	C	C	C	C	C	C	U	U	U	U
Interaction				X				U	C	C	C	C	C	C	C	C	U	U	U	U
Multiple baseline across behaviors	X				X			C	C	C	C	C	C	C	C	C	C	U	U	U
Multiple baseline across situations	X					X		C	C	C	C	C	C	C	C	C	C	U	U	R
Changing criterion							X	R	C	C	C	C	C	C	C	C	U	U	U	U

X indicates occasions for use. C indicates control for a particular source of invalidity, R indicates reduction in the probability of invalidity, and U indicates uncontrolled sources of invalidity.

Adapted from J. Bergan, Behavioral consultation. Columbus, Ohio: Charles E. Merrill, 1977.

TABLE 6–2. Uses and sources of invalidity for multiple-group designs

Design Type	Occasions for Use						Sources of Invalidity: Internal Invalidity									Sources of Invalidity: External Invalidity			
	Single-Intervention Studies	Assessment of the Individual Effects of Multiple Interventions	Assessment of the Combined Effects of Multiple Interventions	When Behavior of One Group Does Not Affect Behavior of Another	Investigations of Generalization across Individuals or Groups	Investigations of Generalization across Systematically Differing Groups or Individuals	History	Maturation	Testing	Instrumentation	Regression	Selection	Group Composition	Instability	Interaction of Selection and Other Sources	Multiple-Intervention Interference	Testing-Intervention Interaction	Selection-Intervention Interaction	Reactive Arrangements
Multiple-Group, Single Intervention	X			X	X		U	C	C	C	C	C	C	C	C	C	U	R	U
Multiple Baseline Across Individuals or Groups	X			X	X		C	C	C	C	C	C	C	C	C	C	U	R	U
Multiple-Group, Multiple Interventions			X	X	X		U	C	C	R	C	C	C	C	U	C	U	U	U
Reversal		X	X	X			C	C	C	C	C	C	C	C	U	C	U	U	U
Stratified ABAB	X					X	C	C	C	C	C	C	C	C	C	U	U	R	U

X indicates occasions for use; C indicates control for a particular source of invalidity; R indicates reduction in the probability of invalidity; and U indicates uncontrolled sources of invalidity.

the consultant would want to discuss with the consultee the possibility of behavior reverting back to baseline levels if the plan is suddenly withdrawn. In this case, the consultant would probably want to recommend that the original plan stay in effect slightly longer with a gradual fading from token to social reinforcement. Ultimately, the consultant in this case would ultimately operate on a self-monitoring/self-reinforcement system.

Sometimes in problem evaluation consultees are not satisfied with the effectiveness of the plan and wish to change the plan to make it more effective. Plans are often not as effective as anticipated because of poor problem identification, poor problem analysis, and/or poor plan implementation (i.e., teachers apply the plan incorrectly or inconsistently). If consultees desire plan modification, it is the consultant's task to use plan strategy and plan tactic questions to have the consultee to describe how he/she will modify the plan to make it more successful (see Chapter 5 for a discussion of plan strategy and plan tactic questions). In effect altering the original plan during problem evaluation is like conducting a second problem analysis interview since you and the consultee are redesigning an intervention plan. Thus in modifying the original plan, the same considerations of problem analysis such as setting analysis (antecedent, sequential, and consequent), plan design, and recording procedures are all necessary.

It is important in problem evaluation to consider how you and the consultee can implement strategies to move children from external control procedures (e.g., token or point systems, timeout, overcorrection, etc.) to less stringent control procedures (e.g., self-monitoring, self-evaluation, and self-reinforcement). This process is known as fading in which you fade (gradually remove) the stimuli that are influencing behavior (e.g., tokens to other stimuli that could influence behavior (e.g., peers, self, etc.) There are two major advantages to fading. One, it requires less monitoring by the teacher when kids are moved from external to self-control procedures and two, self-control procedures have been shown to promote generalization across settings, behaviors, and time (Meichenbaum, 1977).

The final objective of the PEI is to schedule additional interviews if needed or to terminate consultation. If all goals have been achieved, the consultant should formally terminate consultation. Termination should include an invitation to seek further consultation services should the need arise. Extending invitations for further service suggests a willingness on the part of the consultant to provide additional service and often prompts reticent consultees to seek services when needed (Bergan, 1977).

Outline for PEI

I. Evaluate Goal Attainment

A. Questions about outcome

"How did things go?"

B. Questions about goal attainment

"Is Charles completing his work now?"

"Can we say that the goal of increasing Charles' work completion has been attained now?"

II. Evaluate Plan Effectiveness

A. Questions regarding internal validity of plan

"Would you say that the overcorrection procedure was responsible for reducing John's profane language?"

B. Evaluate external validity of plan

"Do you think this plan would have worked with another student?"

III. Conduct Post-Implementation Planning

A. Questions and Statements Regarding Plan Continuation

"Do you want to leave the point system in effect for another week to see if John's progress continues?"

"Perhaps we should continue the DRL program for another week."

B. Questions and Statements Regarding Plan Modification

"You are saying that you want to discontinue the timeout procedure because it has worked so well."

C. Questions and Statements Regarding Plan Modification

"How could we change the reinforcement procedure to make our plan more effective?"

"Perhaps you could reinforce more frequently."

IV. Arrange for Subsequent Interviews or Terminate Consultation

A. Questions and Statements Regarding Future Interviews

"When can we get together again to discuss Gwen's progress under our new plan?"

"We probably need to meet again next week to discuss our new plan."

B. Statements Regarding Termination of Consultation

"Since our goals for Bob have been met, this will be the last time we need to meet unless you have further concerns."

"If you have further problems, please feel free to call on me."

Problem Evaluation Interview Checklist

Required Verbal Units	Frequency of Unit Use
1. Behavior specification elicitors (to initiate examination of plan-implementation data)	_____
2. Behavior specification elicitors or emitters (to describe client behavior)	_____
3. Behavior summarization emitters (to recall behavioral goal and summarize client performance)	_____
4. Behavior-setting summarization emitters (to recall behavioral goal)	_____
5. Behavior positive-validation elicitors (to evaluate goal attainment)	_____
6. Behavior and/or plan specification elicitors (to guide the consultation process)	_____
7. Plan inference emitters (to provide inferences concerning plan effectiveness)	_____
8. Plan positive-validation elicitors (to evaluate role of plan in behavior change)	_____

9. Behavior and/or plan positive-validation elicitors (to establish agreement regarding plan effectiveness) _____

10. Plan specification elicitors and emitters (to establish a post-implementation plan) _____

11. Inference emitters (to describe influences on problem reoccurrence) _____

12. Plan specification and/or inference elicitors and emitters (to establish post-implementation plan strategies and tactics) _____

13. Plan summarization emitters (to summarize the post-implementation plan) _____

14. Plan positive-validation elicitors (to establish agreement concerning the post-implementation plan) _____

15. Observation specification elicitors and emitters (to establish post-implementation recording procedures) _____

16. Observation positive-validation elicitors (to affirm agreement regarding post-implementation recording) _____

17. If necessary, plan specification elicitors and emitters (to establish a contingency plan) _____

18. Other specification elicitors and emitters (to terminate consultation or schedule additional contacts) _____

Practice Exercises for PEI

1. Split up into the same triads as you did for the PII and PAI.
2. Designate one person as consultant, one as consultee, and one as recorder.
3. Conduct a PEI for approximately 5-7 minutes. Switch roles such that every person has the chance to be a consultant.
4. Recorders should use the PEI Checklist to keep track of consultant verbalization.
5. One person should be designated as group spokesman to report back to the large group on the effectiveness of the PEIs.
6. Your workshop leaders will discuss the PEI with the group.

Information Problem: PEI

1. List the four objectives of the PEI
2. Discuss the advantages of an empirical evaluation of behavioral consultation plans.
3. List the three categories of goal attainment and discuss the courses of action for each category.
4. Discuss the advantages of single-case research designs over group research designs.
5. Define the following:
   a) internal validity
   b) external validity
   c) ABAB or reversal design
   d) multiple baseline design
   e) changing criterion design
   f) fading

*If you had any difficulty with these questions, review Chapter 7.

A Form for Coding Cases Involving

Social and Emotional Problems

Child's Name_____

Sex (Circle one)

1-girl 2-boy 3-group of girls 4-group of boys 5-mixed group

COMMUNITY_____ PSYCHOLOGIST_____

SCHOOL_____

TEACHER_____

CHILD'S BIRTHDATE_____

GRADE: (Circle one)

9-kindergarten 8-headstart grades-1,2,3,4,5,6,7,8,9,10,11,12

_____Special education.

REFERRED BY: (Circle one: If more than one actually referred the case, circle applicable ones)

01-child's teacher	10-social worker
02-other teacher	11-counselor
03-principal	12-teacher's aide
05-Field Services Coordinator	13-nurse
08-parent	37-child(self-referral)
09-psychologist	47-other_____

_____

NATURE OF PROBLEM:

_____

PSYCHOLOGIST'S REMARKS:

REFERRAL DATE: __/__/__

PII DATE: _____/_____/_____
Month Day Year

CLOSING DATE _____/_____/_____

TOTAL CONFERENCES BY PSYCHOLOGIST _____

TOTAL CONTACTS WITH:

TEACHER	_____	PARENT INVOLVEMENT	_____
PRINCIPAL	_____	CHILD	_____
PARENT	_____	TEACHER'S AIDE	_____
PROGRAM	_____	FIELD REP.	_____
ASSISTANT	_____	SOCIAL WORKER	_____
COUNSELOR	_____	OTHER	_____

CASE TERMINATION: (Circle one under Case Status and then circle the one principal reason for terminating the case under Explanation of Status).

Case Status (circle one)

1-Problem not defined-No PII-Case not opened (circle 2,3,4,5, 6, 7, or 9, below
2-Plan not implemented-No PAI or plan in PAI not implemented (circle one of 1-3 below)
3-Goal attained (circle 0 below)
4-Goal partially attained (circle 1,3,4,5,6,7, or 8, below)
5-No progress toward goal (circle 1,3,4,5,6,7, or 8, below)

Explanation of Status (circle only one)

0-Plan successful
1-Procedure not affecting behavior as desired
2-Behavior unproved without intervention
3-Change agent decision (will not take data, decides behavior not really a problem. etc.)
4-Child moved from class
5-Referred to other services
6-Irregular school attendance
7-School year ended
8-Revised goal strength or change of target behavior
9-Testing, staffing, consultation only (applies to no. 1 case status)

PROBLEM-IDENTIFICATION INTERVIEW (Adjustment Case)

Date: _____

1. a) What is the target behavior?
   behavior_____
   conditions (cues)_____
   b) Circle or check below the one most applicable target classification:
   (review your copy of the instructions for definitions)

   01--physical assault
   02--destruction
   03--construction
   04--disruption
   11--verbalization-general
   12--verbal dysfluency
   13--inappropriate verbalization
   14--verbal language
   21--group involvement
   22--task production
   23--following rules or directives
   24--interpersonal relationships
   31--personal habits
   32--honesty
   41--physical skill
   42--psycho-physiological reaction
   43--physical dysfunction

2. Measurement procedures:
   a) strength measure: (circle one)

   1 frequency
   2 amplitude (specify)_____
   3 latency: seconds____ minutes____ hours____
   4 percentage
   5 cumulative frequency

   b) When will you record?

   1 continuous (all day)
   2 time sampling (specify when) every____ seconds____ minutes
   or____ hours

PROBLEM-ANALYSIS INTERVIEW
(Adjustment Case)

Date: _____

What is the desired strength of target behavior (goal)?

Modification Plan:

Is the child told about the plan? ( ) yes ( ) no

Who are the change agents? (circle no more than three)

1-teacher
2-counselor
3-aide
4-psychologist
5-parent
6-tutor(s)
7-other (specify) _____
8-child
9-principal

Target Behavior Modification:

Are any changes to be made in the "preceding environment"?
If so, what are the changes?

Are any changes to be made in the "consequent environment"?
If so, what are the changes? How will the plan be implemented?

1. Goal of plan is to: (circle one)
   0-maintain target behavior
   1-increase target behavior
   2-decrease target behavior

2. Antecedent Events: (Refer to your copy of the instructions for definitions and circle up to five--no more than five--of the following that define procedure you described on the previous page.)

   1-modeling
   2-prompting
   3-establishing, altering, or removing an S^D
   4-physical response guidance
   5-incontingent application of hypothesized reinforcer
   6-task alteration

3. Consequent Events: (Refer to your copy of the instructions for definitions and circle up to five--no more than five--of the following that define procedure you described on the previous page.)

1-add positive reinforcer
2-remove positive reinforcer
3-add an aversive stimuli
4-remove aversive stimuli
5-extinction
6-DRO
7-counseling

4. Positive reinforcers and aversive stimuli used: (List below any positive reinforcers and aversive stimuli that are mentioned in the plan you described on the previous page. Use the following list and give the number in the appropriate blanks.)

   1-consumable-M&M, dessert
   2-objects-doll, rabbit
   3-activities-typing, playing football, graphing
   4-position, location-first in line for lunch, time-out
   5-physical-hug
   6-verbal-praise,verbal acknowledgment in front of class
   7-tokens-stars, chips

   List the numbers of any positive reinforcers used, using numbers from the list above and listing no more than three--leave blank if not applicable.

   List the numbers of any aversive stimuli used, using numbers from the list above and listing no more than three--leave blank if not applicable.

   List the number of any reinforcers for which tokens are exchanged, using numbers from above and listing no more than three--leave blank if not applicable.

5. Graph data below.

Adopted from Bergan (1977), Behavioral consultation. Columbus, Ohio: Charles E. Merrill.

CHAPTER 8

INTEGRATION OF INFORMATION FROM BEHAVIORAL CONSULTATION

A large amount of information is collected during the course of behavioral consultation. The primary sources of this information are the PII, PAI, and the PEI. Within these three interviews reside a wealth of information regarding both consultee and child behavior. Given this body of information, there must be a means of recording, organizing, and integrating this information for current as well as future use.

One way of recording and organizing much of this information is to tape all interviews with the consultee. This provides a tangible record of presenting problems, problem analyses, intervention plans, and plan evaluations. There are at least four advantages to taping consultation interviews. One, it allows the consultant to review the tapes to make sure he/she understands the nature of the problems and the conditions surrounding behavior. Two, it allows the consultant to concentrate on what the teacher is saying rather than trying to listen and write at the same time (i.e., it allows for better rapport). Three, it allows consultants to review the tapes for feedback and training purposes so that they can improve their interviewing skills. Four, tapes can be organized and filed by date and type of interview for reference concerning future consultation cases. This is one way in which the external validity of consultation plan can be established in that if the same plan is successful across other consultees,

children, and settings--then these plans have evidence for external validity (see Chapter 7).

A second way of organizing and integrating information is to write the proposed plan with the consultee giving a copy to the consultee which can be used for reference. Included in this written plan should be: 1) Definition of problem behaviors, 2) Recorded frequency/rate/duration of problem behaviors, 3) Written analysis of conditions surrounding problem behaviors, 4) Verbatim description of plan, 5) Description and rationale of techniques used. There are at least three advantages of writing the consultation plan. One, the consultee has a copy of the plan which can be referred to and reviewed to ensure proper implementation. Second, the plan can be written in the form of a behavioral contract between the teacher and the consultant that would specify each's commitment to the plan. Three, the plan can be filed for future reference by both the consultant and the consultee. The filed plan could be used to document the effectiveness of intervention (i.e., accountability) and/or be consulted for future behavior problems. Written plans could also be used to establish the plan's external validity.

A third way of organizing and integrating information in behavioral consultation is to provide the consultee with a written evaluation of the plan. Included in this written evaluation should be a brief description of the problem, the intervention used, and the social validity of the plan.

Social validity is one of the most important aspects of consultation evaluation. Social validity refers to the extent that behavior change is

considered important or socially useful by teachers and others in the environment. Thus, social validity is established when someone judges outcomes of consultation as having value to society. Wolf (1978) has identified three levels of social validity.

The first level concerns the social significance of the goals. The question being asked here is: "Are the goals of consultation really what society wants?" For example, suppose the teacher's goal is to have her class sit quietly all day, be solemnly still, and not exhibit any behavior that could potentially be disruptive. It is unlikely that society's goal for school children is to have them "be still, be quiet and be docile" (Winett & Winkler, 1972). The message in this first level of social validation is to select with the consultee behavioral goals that are socially significant.

The second level of social validation concerns the social appropriateness of the intervention procedures. The question being asked here is: "Do the participants in consultation consider the intervention procedures socially acceptable?" An example of this is the use of aversive learning procedures such as timeout, chemical aversion, or corporal punishment. Given past state and federal regulations concerning the use of aversive procedures as well as ethical and moral concerns (see Florida Guidelines, 1974), it is unlikely that many teachers or psychologists would consider the use of punishment-based procedures first. Good behavioral

practice suggests that reinforcement-based procedures be used initially in remediating problem behaviors.

The third level of the social validation process concerns the social importance of the effects achieved in consultation. The question being asked here is: "Are consumers (teachers and parents) satisfied with the results?" An example of this would be when an intervention plan designed to decrease off-task behavior results in an increase in academic performance.

Subjective evaluation involves having judges with special expertise (teachers, parents, peers) rate the behavior of subjects before and after treatment is implemented. There are many ways to secure subjective evaluations. One, consultants could construct simple Likert-type rating scales for teachers to rate children on a pre and post plan basis. Two, sociometric rating scales could be used before and after interventions to assess whether or not target children have increased in peer acceptance as a result of intervention. Three, if the child has several teachers, these other teachers could rate problems behaviors before and after intervention to assess the amount of setting and behavior generalization. Four, parents could subjectively evaluate the child's verbal behavior (attitudes toward school, particular classes, etc.) after intervention plans. These are just a few of the many ways in which intervention plans can be socially validated through subjective evaluation.

In summary, social validation is best conceptualized as an iterative process which assists consultants in selecting the most significant target behaviors, in selecting the most appropriate intervention procedures, and in

evaluating the social importance of the effects in consultation. A comprehensive social validation would include both norm-based comparisons and subjective judgments, however school psychologists most teachers would socially validate these results by saying that increased academic performance is a socially, important outcome. School psychologists have often designed and evaluated intervention plans without considering the social importance of the behavior changes effected.

How do you as a behavioral consultant establish the social validity of interventions? Van Houten (1979) offers an excellent presentation on the process of social validation. Van Houten states that there are two means of socially validating interventions: 1) social comparison and 2) subjective evaluation.

Social comparison involves comparing the performance of target children with that of peers who did not warrant intervention. Thus, if target children's behavior falls within the normative range of behavior frequency or duration, then the intervention is considered socially valid. Obviously, social comparison would involve collecting data on nontarget as well as target children in order to make these comparisons. One approach would be to have the teacher nominate nontarget children who are high average, and below average on the behavior of concern (e.g., disruptive behavior, academic completion and accuracy, etc.). Given these micro-norms, the consultant can objectively evaluate whether the target child has moved into the normative range of behavior. Many school psychologists only have time (given their current caseloads) for the easier of the two which is subjective evaluation by teachers, parents, and/or peers.

CONCLUSION

Behavioral consultation has been established as an effective form of psychological service in the schools. Through the skillful of verbal behavior, behavioral consultants can specifically define problems to be solved, analyze conditions surrounding problem behavior, design and help implement intervention plans, and evaluate the effectiveness of those plans. Perhaps the most important aspect of behavioral consultation is that it only focuses upon these variables over which teachers and school psychologists have control (e.g., behavior, behavior setting, observation, and plan). Behavioral consultation also allows teachers to become partners in the problem solving process (via plan tactic questions) which usually results in the identification of resources that can be summoned to solve problems in consultation.

Behavioral consultation is a particularly effective form of teacher consultation for changing children's behavior. What accounts for this effectiveness? Bandura's (1977) self efficacy theory offers a tenable explanation for the effects of behavioral consultation. According to self efficacy theory, a person holds two types of expectations regarding behavior. The first type of expectation is known as an outcome expectation in which the person believes that a given behavior will lead to certain outcome. The second type of expectation is an efficacy expectation in which the person believes that he/she has the skills to successfully execute the behavior required to produce the desired outcome. According to Bandura (1977), outcome and efficacy expectations are differentiated because

individuals can believe that a particular course of action will produce certain outcomes, but if they entertain serious doubts about whether they can perform the necessary activities such information does not influence their behavior.

It is suggested that behavioral consultation enhances teachers' efficacy expectations because it not only focuses upon those variables over which teachers have control, but also it allows teachers to assist in designing intervention plans through the consultant's use of plan strategy and plan tactic questions. Other modes of consultation, particularly mental health consultation, tend to focus on variables over which consultees have no control such as background environment (SES, broken family child, birth history, number of brothers and sisters, family constellation, etc.) and individual characteristics (e.g., intellectual characteristics, physical characteristics, age, so-called personality traits, etc.). This focus upon mutable variables probably leaves the consultee with a weakened sense of self efficacy. That is, they view the problem as being one that cannot be solved because they do not have the skills to solve it.

On the other hand, behavioral consultation probably enhances teachers' self efficacy because it emphasizes those variables that teachers can control. Moreover, they are directly involved in designing the intervention plan which adds to their sense of self efficacy. As a result, teachers come to view themselves as possessing the skills to execute the behaviors necessary to produce the desired outcomes (i.e., changes in behaviors that are causing problems in the classroom).

School psychologists using the behavioral consultation model should realize success in the interventions they and teachers design for children. Hopefully, this handbook has contributed to your understanding of this effective form of psychological intervention.

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